

## California Monthly Climate Summary July 2008

### **Weather Highlights**

July 2008 was another month of slightly above average temperatures and below average precipitation. According to the Western Region Climate Center's [California Climate Tracker](#), the monthly average temperature was 74.4°F which is 0.4°F above the long-term average temperature for the state. With a statewide average of 0.09 inches, precipitation for July was 67% of the long term average.

July 2008 was a dry month highlighted by a heat event. During the first week of July a strong high pressure system resided over the four corners region providing warm and dry conditions for California. Temperatures were slightly lowered due to smoke from numerous wildfires in the state. During the second week, high pressure continued to dominate the weather pattern with temperatures soaring above 100 for many parts of the state. Towards the end of the week temperatures monsoonal moisture worked its way into southern California and the high pressure system started to break down. Scattered thunderstorms popped up in the southern mountains and southeastern deserts. The third week of July continued the pattern of high pressure and warm temperatures. A strengthening marine layer increased onshore flow in the Sacramento/San Joaquin Delta region. Continued subtropical moisture flow into the southern part of the state led to more thunderstorms. Some of these storms led to significant localized rainfall events resulting in flash floods and debris flows. The end of July saw a leak low pressure system off the coast. This system brought enough moisture to cause isolated showers along the west slope of the Sierra Nevada Mountains. Temperatures were well below normal during this time. July closed out with smoke and haze continuing to cause air quality problems in many parts of northern California.

Preliminary records, reported on the National Weather Service Record Event Report, show that statewide there were 66 temperature records tied or broken, and zero precipitation records tied or broken for the month. Of the 66 temperature records, 31 were for new high maximums. On July 8<sup>th</sup>, Potter Valley set a new daily maximum temperature record of 106°F breaking the 1941 reading of 103°F. Fort Bragg also set a new daily maximum temperature record on July 8<sup>th</sup> reaching 79°F. This broke the old record of 76°F set in 1993. In contrast, Redding on July 8<sup>th</sup> tied the highest minimum temperature record set back in 1905 with a reading of 82°F. The daily maximum temperature for Redding was also a new record with a reading of 112°F. This broke the old record of 109°F set back in 1905 as well. On July 9<sup>th</sup> Fresno set a new high minimum temperature with a reading of 81°F. This broke the old record of 79°F set back in 1896. Sacramento also tied an 1896 high minimum temperature record on July 10<sup>th</sup> with a reading of 72°F. At the other end of the spectrum Crescent City tied a low minimum temperature record on July 31<sup>st</sup> with a reading of 44°F. The old record was set in 1975.

For the California Data Exchange Center's (CDEC) network of temperature gages used in this report, 4 stations recorded a minimum temperature below freezing, and 113 stations recorded a maximum temperature above 100°F. Statewide extremes from the CDEC network of temperature gages are shown below. Also shown are the monthly average extremes from the CIMIS network. A table of regional average minimum, mean, and maximum temperatures from the CDEC and CIMIS networks is also shown.

Precipitation in July was below normal. The largest amount of precipitation recorded in the CDEC precipitation gages for June 2008 was Lodgepole in the Tulare Basin with 1.50 inches. This is well above the average of 0.14 inches. At the other end of the spectrum, 99 stations recorded no rain for the month. For the CIMIS network, Denair in Stanislaus County topped the precipitation charts with 0.87 inches for the month. Ninety-three stations in the CIMIS network recorded zero for precipitation for the month. The 8-Station Index for northern California precipitation recorded 0.01 inches in July. On average 0.18 inches of precipitation is recorded for the 8-Station index in June. This is the driest March-July period for the 8-Station Index in the period on record with only 3.43 inches recorded. This beat the previous record set in water year 1924 when 3.69 inches were recorded. Statewide, the average precipitation for July was 34.5% of the long-term average based on the California Data Exchange Center (CDEC) gages. Precipitation percentages by region from the CDEC gages are shown in a table at the end of this document.

In July, the Drought Monitor expanded the depiction of drought conditions in California. The maps for California for July 1, 2008 and July 29, 2008 are shown below. The Drought Monitor maps can be found on the National Drought Mitigation Center's (NDMC) website <http://drought.unl.edu/dm/>. These maps are largely a reflection of precipitation and soil moisture deficit estimates. As of July 29, 2008, the California depiction has 0.1% of the state drought free, 11% listed in the D0 – Abnormally Dry, 50.2% listed in the D1 – Moderate Drought, and 38.7% listed in the D2 – Severe Drought category. Rangeland conditions are the major impact of concern. Maps are updated weekly.

The U.S. Seasonal Drought Outlook for August through October from NOAA depicts California with persisting drought conditions across most of the state. Updates are provided twice per month. Maps and information can be found at [http://www.cpc.noaa.gov/products/expert\\_assessment/seasonal\\_drought.html](http://www.cpc.noaa.gov/products/expert_assessment/seasonal_drought.html).

Outlooks for the water year 2008 water supply index categories can be found in the [executive update of hydrologic conditions](#). As of the August 2, 2008 update, the median Sacramento Basin outlook was critical and the median outlook for the San Joaquin Basin was dry. Statewide water-year runoff is expected to be approximately 60% of average this year. Water supply information for California can be found at [http://cdec.water.ca.gov/water\\_supply.html](http://cdec.water.ca.gov/water_supply.html). A Historical listing of water year categories for both basins can be found at <http://cdec.water.ca.gov/cgi-progs/iodir/WSIHIST>.

### **ENSO Conditions and Long-Range Outlooks**

The El Niño/Southern Oscillation (ENSO) is now in a neutral pattern. Some tropical atmospheric conditions reflect lingering La Nina conditions as sea surface temperature anomalies continue to change. Equatorial sea surface temperature anomalies for the tropical Pacific for July varied between 1.0°C and -0.4°C. The May through July 3-month running mean of the Ocean Niño Index was -0.4 which is the first time the running mean has been outside the La Nina threshold of -0.5°C since June/July/August 2007. The largest negative value in the series is the Dec/Jan/Feb value of -1.5. Most statistical and dynamical models forecast ENSO neutral conditions through winter of 2009. More information can be found at the Climate Prediction Center's web site:

[http://www.cpc.ncep.noaa.gov/products/analysis\\_monitoring/enso\\_advisory/](http://www.cpc.ncep.noaa.gov/products/analysis_monitoring/enso_advisory/)

Updates are posted weekly. The latest three month outlook (August through October) from NOAA indicates equal chance for above or below normal temperatures for California with the exception of the far north coast (below normal) and southeastern (above normal) locations. For precipitation, below average conditions are forecast for the northern part of the state. Outlook plots and discussions can be found at <http://www.wrcc.dri.edu/longrang/>. General weather information of interest can be found at <http://www.noaawatch.gov/>. For anomaly information please see [http://www.wrcc.dri.edu/anom/cal\\_anom.html](http://www.wrcc.dri.edu/anom/cal_anom.html).

### **Agricultural Data**

Wheat harvest was completed during the month of July. Alfalfa fields continued to be cut, winnowed, raked, and baled. Cotton and rice crops were growing nicely. Safflower was being dried before harvest. Grape harvest was picking up during the month. Nectarines, figs, Asian pears, peaches, plums, pluots and currants were being picked. The olive crop appeared to be irregular with some groves too light to harvest. Nut trees were showing a heavy set with limbs being propped. Some limb breakage was occurring in walnut groves due to the heavy set. Due to dry conditions, irrigation was widespread. Efforts were also undertaken to control weeds, diseases and insects. Pasture conditions continue to be a major concern for livestock. Milk production decreased due to the hot weather. For further crop and livestock information see <http://www.nass.usda.gov/index.asp>

### **Other Climate Summaries**

[California Climate Tracker](#) (new product of Western Region Climate Center)

[Golden Gate Weather Service Climate Summary](#)

[NOAA Monthly State of the Climate Report](#)

### **Statewide Extremes (CDEC)**

High Temperature – 118°F (Rice Valley, Colorado River Desert)

Low Temperature – 27°F (Tuolumne Meadows, San Joaquin Basin)

High Precipitation – 1.50 inches (Lodgepole, Tulare Basin)

Low Precipitation – 0 inches (99 stations)

**Statewide Extremes (CIMIS)**

High Average Maximum Temperature –111.2°F (Salton Sea East, Imperial County)

Low Average Minimum Temperature – 44.6°F (Alturas, Modoc County)

High Precipitation – 0.87 inches (Denair, Stanislaus County)

Low Precipitation – 0 inches (93 stations)

**Statewide Precipitation Statistics**

Hydrologic Region	Region Weight	Basin Reporting			Stations Reporting			% of Historic Average	
		Basins	Jul	Oct-Jul	Stations	Jul	Oct-Jul	Jul	Oct-Jul
North Coast	0.27	5	5	4	17	10	7	10.1%	89%
SF Bay	0.03	3	3	3	6	6	5	0.0%	88%
Central Coast	0.06	5	5	5	10	8	6	0.0%	90%
South Coast	0.06	5	5	5	15	10	9	5.2%	79%
Sacramento River	0.26	10	10	10	43	34	31	2.5%	74%
San Joaquin River	0.12	8	7	7	27	23	20	28.0%	75%
Tulare Lake	0.07	5	5	5	27	25	25	139.9%	79%
North Lahontan	0.04	6	6	6	14	10	9	36.0%	77%
South Lahontan	0.06	5	4	4	14	8	7	95.6%	86%
Colorado River	0.03	2	2	2	6	3	3	349.9%	111%
Statewide Weighted Average	1	54	52	51	179	137	122	34.5%	82 %

**Statewide Mean Temperature Data by Hydrologic Region (degrees F)**

Hydrologic Region	No. Stations	Minimum	Average	Maximum
North Coast	34	47.3	67.7	96.1
SF Bay	16	52.1	68.1	89.5
Central Coast	33	52.9	65.1	82.3
South Coast	69	56.0	73.2	94.2
Sacramento	85	51.8	72.9	98.4
San Joaquin	72	53.9	72.8	94.3
Tulare Lake	14	48.3	67.5	88.8
North Lahontan	9	43.7	68.7	91.3
South Lahontan	20	54.0	72.8	92.2
Colorado River Desert	23	74.8	91.3	106.9
Statewide Weighted Average	375	51.4	70.9	94.7

# U.S. Drought Monitor

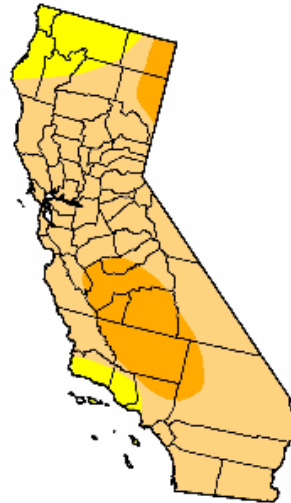
## California

July 1, 2008  
Valid 7 a.m. EST

	Drought Conditions (Percent Area)					
	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	0.2	99.8	89.2	18.1	0.0	0.0
Last Week (06/24/2008 map)	0.2	99.8	89.2	18.1	0.0	0.0
3 Months Ago (04/08/2008 map)	36.8	63.2	39.6	5.5	0.0	0.0
Start of Calendar Year (01/01/2008 map)	8.9	91.1	84.7	58.0	14.6	0.0
Start of Water Year (10/02/2007 map)	0.0	100.0	92.6	64.6	33.8	0.0
One Year Ago (07/03/2007 map)	0.0	100.0	92.3	65.3	35.2	0.0

### Intensity:

<span style="background-color: yellow;">   </span> D0 Abnormally Dry	<span style="background-color: red;">   </span> D3 Drought - Extreme
<span style="background-color: orange;">   </span> D1 Drought - Moderate	<span style="background-color: darkred;">   </span> D4 Drought - Exceptional
<span style="background-color: darkorange;">   </span> D2 Drought - Severe	



The Drought Monitor focuses on broad-scale conditions.  
Local conditions may vary. See accompanying text summary  
for forecast statements

<http://drought.unl.edu/dm>

# U.S. Drought Monitor

## California



Released Thursday, July 3, 2008

Author: Rich Tinker, CPC/NOAA

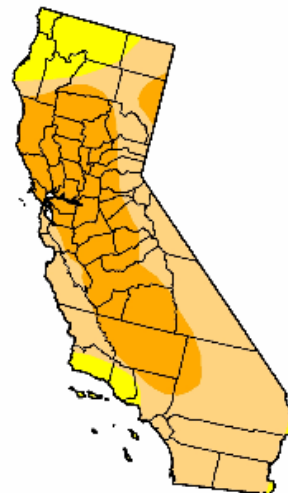
July 29, 2008

Valid 7 a.m. EST

	Drought Conditions (Percent Area)					
	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	0.1	99.9	88.9	38.7	0.0	0.0
Last Week (07/22/2008 map)	0.1	99.9	88.9	16.6	0.0	0.0
3 Months Ago (05/06/2008 map)	7.7	92.3	48.4	9.3	0.0	0.0
Start of Calendar Year (01/01/2008 map)	8.9	91.1	84.7	58.0	14.6	0.0
Start of Water Year (10/02/2007 map)	0.0	100.0	92.6	64.6	33.8	0.0
One Year Ago (07/31/2007 map)	0.0	100.0	92.3	65.3	35.2	0.0

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for forecast statements

<http://drought.unl.edu/dm>



Released Thursday, July 31, 2008

Author: B. Fuchs, NDMC, and L. Edwards, WRCC